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## CLAIMS

Sub 1 A solid state image sensor device comprising:  
an image sensing cell array portion including a  
plurality of unit cells, the unit cells being arranged  
in a matrix form on a semiconductor substrate, the  
image sensing cell array portion having a photo-  
sensitive pixel region and an optical black pixel  
region, the unit cells of the photo-sensitive pixel  
region for sensing an image, and the unit cells of the  
optical black pixel region for defining an optical  
black level;

15 a selecting circuit for selecting the unit cells  
of the image sensing cell array portion in a unit of  
one horizontal line of the image sensing cell array  
portion;

a plurality of vertical signal lines on which signals are read out from the unit cells selected by the selecting circuit; and

20 a wiring short-circuiting at least two of the  
vertical signal lines in the optical black pixel region  
with each other.

2. A solid state image sensor device according to claim 1, wherein at least one of the vertical signal lines in the optical black pixel region is excluded from being short-circuited with said at least two vertical signal lines by the wiring.

3. A solid state image sensor device according to

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7. A solid state image sensor device comprising:

an image sensing cell array portion including a plurality of unit cells, the unit cells being arranged in a matrix form on a semiconductor substrate, the image sensing cell array portion having a photo-sensitive pixel region and a plurality of optical black pixel regions having optical black levels different from each other, the unit cells of the photo-sensitive pixel region for sensing an image, and the unit cells of the optical black pixel regions for defining optical black levels;

a selecting circuit for selecting the unit cells of the image sensing cell array portion in a unit of one horizontal line of the image sensing cell array portion;

a plurality of vertical signal lines on which signals are read out from the unit cells selected by the selecting circuit; and

a wiring short-circuiting a plurality of the vertical signal lines in the optical black pixel regions with each other.

8. A solid state image sensor device according to claim 7, wherein at least one of the vertical signal lines in the optical black pixel regions is excluded from being short-circuited with said plurality of vertical signal lines by the wiring.

9. A solid state image sensor device according to claim 7, wherein at least one of the vertical signal

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junction diode.

13. A solid state image sensor device according to claim 7, wherein the wiring causes levels of the readout signals of said plurality of vertical signal lines to be averaged.

14. A solid state image sensor device comprising:  
an image sensing cell array portion including a plurality of unit cells, the unit cells being arranged in a matrix form on a semiconductor substrate, the image sensing cell array portion having a photo-sensitive pixel region, a first optical black pixel region and a second optical black pixel region having an optical black level different from that of the first optical black pixel region, the unit cells of the photo-sensitive pixel region for sensing an image, and the unit cells of the first and second optical black pixel regions for defining optical black levels;

a selecting circuit for selecting the unit cells of the image sensing cell array portion in a unit of one horizontal line of the image sensing cell array portion;

a plurality of vertical signal lines on which signals are read out from the unit cells selected by the selecting circuit; and

a wiring short-circuiting at least two of the vertical signal lines in the first and second optical black pixel regions with each other, one of which being

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wiring, and wherein at least one of the vertical signal lines in the first and second optical black pixel regions, which is at the opposite side of the photo-sensitive pixel region, is excluded from being short-circuited with said at least two vertical signal lines by the wiring.

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19. A solid state image sensor device according to claim 14, wherein the unit cells of the first optical black pixel region include a PN junction diode as a photoelectric conversion element and the unit cells of the second optical black pixel region include no PN junction diode.

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20. A solid state image sensor device according to claim 14, wherein the wiring causes levels of the readout signals of said at least two vertical signal lines to be averaged.

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